

TWO NEW SPECIES OF *ARCHIBACCHARIS* (ASTERACEAE: ASTEREEAE)  
FROM OAXACA, MÉXICO

Guy L. Nesom

Department of Botany, University of Texas, Austin Texas 78713 U.S.A.

ABSTRACT

Two new species of *Archibaccharis* sect. *Archibaccharis* from south central Oaxaca, México are described: *A. macdonaldii* and *A. nephcephala*.

KEY WORDS: *Archibaccharis*, Asteraceae, Astereae, México.

Recent collections from south central Oaxaca by Dr. Andrew McDonald include a number of previously undescribed species, among them two species of *Archibaccharis*. Both are erect shrubs and members of sect. *Archibaccharis*, but they are only distantly related to each other within that section. Both are known only from the type collection.

*Archibaccharis macdonaldii* Nesom, *sp. nov.* TYPE: MÉXICO. Oaxaca: Cerro Quiexobra and vicinity, 35 km ESE of Miahuatlán, 5 km NE of Santo Domingo Ozolotepec, timberline vegetation in open glades along ridges and in mountain saddles, dominated below by pine forest, common on dry, ridge tops, SE exposure, 3650-3800 m, 10 Dec 1989, *A. McDonald 2932* (HOLOTYPE: TEX; isotypes: F, MEXU, NY).

*A. hieracioides* (S.F. Blake) S.F. Blake similis sed foliis multo minoribus paucidentatis, capitulis minoribus, et corollis pistillatis ligulis brevibus differt.

Woody, erect shrubs. Stems 1-2 m tall, the upper highly branched and dark purple-brown. Stems, leaves, and phyllaries moderately to densely invested with short stipitate resin glands, the stems also sparsely villous. Leaves densely arranged, obovate, basally attenuate to a subpetiolar base, not clasping, 6-16 mm long, 3-7 mm wide, with 1-3 pairs of coarse teeth, thick textured with the upper surface somewhat shiny, glandular but otherwise glabrous or with a few, scattered hairs. Heads campanulate-turbinate, 3-4 mm wide, on wiry pedicels 7-15 mm long, in distinctly flat topped corymbs; phyllaries oblong-lanceolate, purple tipped, graduated, the inner 4.0-4.5 mm long, with

hyaline, lacerate-ciliate margins; receptacles deeply alveolate. Pistillate heads: pistillate flowers 28-29, with ligules 0.2-0.3 mm long; hermaphroditic flowers 4, with sterile ovaries; achenes 1.2-1.4 mm long, flat, with 2 thick, lateral ribs, eglandular, sparsely strigose; pappus bristles 40-45, somewhat uneven in length, the longest 4-5 mm long. Staminate heads not seen.

*Archibaccharis macdonaldii* is closely related to *A. hieracioides* and *A. auriculata* (Hemsley) Nesom (see Nesom 1988) but most similar to the former in its non-clasping, sub-petiolar leaves. With both of the other taxa, the new species shares an erect habit, stipitate glandular vestiture, and relatively large, thin pedicellate heads in an open, distinctly flat topped, corymbose capitulescence. In contrast to both relatives, *A. macdonaldii* has a woodier habit, thicker, much smaller and coarsely toothed leaves, and smaller heads with ligulate pistillate corollas, as specified in the following couplet.

- |  |                        |
|--|------------------------|
| 1. Leaves 4-18 cm long, 20-45 cm wide, with 5-13 shallow, apiculate teeth per side; inner phyllaries 5.0-6.5 mm long; pistillate corollas<br>eligulate .....           | <i>A. hieracioides</i> |
| 1' Leaves 0.6-1.5 cm long, 3-7 mm wide, with 1-3 coarse teeth per side; inner<br>phyllaries 4.0-4.5 mm long; pistillate corollas with ligules 0.2-0.3 mm<br>long ..... | <i>A. macdonaldii</i>  |

The only other species of the genus with such extreme woodiness and small, thick leaves is the isolated *Archibaccharis peninsularis* S.F. Blake from Baja California Sur. Because both *A. hieracioides* and *A. auriculata* occur at lower elevations, are more herbaceous, and have much larger and thinner leaves than *A. macdonaldii*, and because they are similar in these respects to the rest of the genus, I hypothesize that the morphology of the new species is evolutionarily derived with respect to its closest relatives. It is not clear, however, whether it is the sister taxon of *A. hieracioides* or of both *A. hieracioides* and *A. auriculata*.

***Archibaccharis nephocephala*** Nesom, *sp. nov.* TYPE: MÉXICO. Oaxaca: Dirt road between La Cienegilla and San Gregorio Ozolotepec, ca 5 km N of La Cienegilla, roadside weed, pine forest or cloud forest dominated by *Clethra*, *Pinus* and *Quercus*, ca 2500-3000 m, 12 Dec 1989, *A. McDonald 2971* (HOLOTYPE: TEX; Isotypes: F, MEXU, NY).

*A. serratifoliae* (Kunth) S.F. Blake similis sed foliis petiolis longioribus laminis longioribus apicibus acuminatoribus et capitulis paucioribus confertim dispositis differt.

Erect shrubs. Stems 2.5 m tall, slightly zig zag in the capitulescence, eglandular, pilose-villous, the hairs with thick and viscid bases. Leaves ovate

with long acuminate apices and serrulate-apiculate margins, the blades thin, 9-12 cm long, 3-4 cm wide, basally attenuate to narrow petioles 15-25 mm long, the lower surfaces moderately villous with thin based, crinkly, whitish vitreous hairs, the upper surfaces moderately hispid-pilose with stiffer hairs with thick and orangish bases. Heads cuneate, 3 mm wide, in dense, subcorymboid to rounded panicles; phyllaries lanceolate, graduated, the longest 1.5-2.0 mm long, with thinly pilose-ciliate upper margins, otherwise glabrous or with a few, scattered hairs. Pistillate heads: pistillate flowers 19-20, with ligules 0.4-0.5 mm long; hermaphroditic flowers 1, with sterile ovaries; achenes 1.0-1.2 mm long, flat, with 2(-4) thick, lateral ribs, eglandular, sparsely strigose to glabrous; pappus bristles 14-16, 1.6-2.0 mm long. Staminate heads: staminate flowers 20-21, the corollas 2.0-2.2 mm long, with abortive ovaries.

The epithet refers to the cumulus shaped capitulescences as well as the cloud forest habitat of the new species.

*Archibaccharis nephocephala* is most similar, and perhaps most closely related, to the much more widespread *A. serratifolia* (Jackson 1975) in its erect habit, eglandular but densely pilose to villous vestiture and ovate-acuminate leaves. The new species differs strongly in its much longer acuminate leaves with longer petioles and in its much smaller and more densely arranged heads with smaller corollas. Technically, they can be separated by the following couplet.

- |   |                        |
|---|------------------------|
| 1. Petioles 1-10(-15) mm long; phyllaries 4-5 mm long; staminate corollas 3.9-5.0 mm long ..... | <i>A. serratifolia</i> |
| 1' Petioles 15-25 mm long; phyllaries 1.5-2.0 mm long; staminate corollas 2.0-2.2 mm long ..... | <i>A. nephocephala</i> |

#### ACKNOWLEDGMENTS

I thank Drs. Billie Turner and Andrew McDonald for their review and comments on the manuscript.

#### LITERATURE CITED

- Jackson, J.D. 1975. A revision of the genus *Archibaccharis* Heering (Compositae - Astereae). *Phytologia* 32:81-194.
- Nesom, G.L. 1988. Studies in Mexican *Archibaccharis* (Compositae: Asteraceae). *Phytologia* 65:122-128.